

P.O. BOX 12014, T.W. ALEXANDER DRIVE, RESEARCH TRIANGLE PARK, NC 27709 24-HOUR EMERGENCY TELEPHONE 1-800-334-7577 OR CHEMTREC 1-800-424-9300

EFFECTIVE DATE: DEC 7, 1988

DATE PRINTED: APR 9, 1993

PRODUCT CODES: S80801206LB , P21452 , P80381

EPA REGISTRATION NUMBER: 264-324

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PRODUCT NAME: SEVIN(R) BRAND 99% TECHNICAL CARBARYL INSECTICIDE

I. IDENTIFICATION

CHEMICAL NAME: 1-NAPHTHYL N-METHYLCARBAMATE

FORMULA:

C12H11NO2

MOLECULAR WEIGHT: 201.20

SYNONYMS: CARBARYL

CAS # & NAME: 63-25-2 1-NAPHTHALENOL. METHYLCARBAMATE

IMPORTANT HEALTH EFFECT INFORMATION

WARNING

MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH THE SKIN.

SEE SECTION IV FOR COMPLETE HEALTH HAZARD DATA.

NATIONAL FIRE PROTECTION ASSOCIATION RATING (RECOMMENDED BY RHONE-POULENC AG COMPANY)

KEY	HEALTH
	3
4=EXTREME	! !!
3=HIGH	FIRE
2=MODERATE	1
1=SLIGHT	i i:i
O=MINIMUM	REACTIVITY
	1
	!!!

SARA TITLE III HAZARD CLASSIFICATION

IMMEDIATE (ACUTE) HEALTH YES DELAYED (CHRONIC) HEALTH NO FIRE NO SUDDEN RELEASE OF PRESSURE NO REACTIVE

9003056

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II. HAZARDOUS INGREDIENTS

MATERIAL------WEIGHT %-----

(1) CARBARYL, (1-NAPHTHYL N-METHYLCARBAMATE)

99

EXPOSURE LIMITS:

CARBARYL: 5MG/CUBIC METER OF AIR TLV-TWA (ACGIH) AND PEL-TWA (OSHA)

III. PHYSICAL DATA

BULK DENSITY:

BOILING POINT, 760 MM HG, DEGREES C (F): NOT APPLICABLE

MELTING POINT, DEGREES C (F): 142 (288)

FREEZING POINT, DEGREES C (F):

VAPOR PRESSURE, 25 DEGREES C:

VAPOR DENSITY (AIR=1):

SOLUBILITY IN WATER, %/WT @30 DEGREES C:

APPEARANCE AND ODOR:

32 TO 38 POUNDS/CUBIC FOOT

NOT APPLICABLE

LESS THAN 0.000040 MM HG

NOT APPLICABLE

NOT KNOWN

40 PPM

WHITE TO LIGHT TAN SOLID;

MILD PHENOLIC ODOR

IV. HEALTH HAZARD DATA

GENERAL INFORMATION

THE TOXICOLOGY DATA PRESENTED IN THIS MSDS REPRESENTS STUDIES ON THIS PRODUCT AS WELL AS OTHER CLOSELY RELATED TECHNICAL PRODUCTS. ILLNESS MAY OCCUR RAPIDLY AFTER EXPOSURE TO THIS PRODUCT. THE PRINCIPAL HAZARD OF THIS PRODUCT IS REVERSIBLE CHOLINESTERASE INHIBITION. SYMPTOMS ARE DOSE-DEPENDENT, ARE RAPID IN ONSET, AND ARE REVERSIBLE IN TIME. THE MAIN SYMPTOMS ARE LISTED BELOW.

TOXICOLOGY DATA:

ORAL LD50 (RATS): 264 MG/KG BODY WEIGHT DERMAL LD50 (RABBITS): > 2000 MG/KG BODY WEIGHT INHALATION LC50 (RATS - 4 HOUR EXPOSURE): 2.50 MG/L

SKIN EFFECTS (RABBITS): MINIMAL IRRITATION

EYE EFFECTS (RABBITS): SLIGHT IRRITATION

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IV. HEALTH HAZARD DATA (CONTINUED)

CARCINOGENICITY, TERATOGENICITY, MUTAGENICITY:

CARBARYL, WHEN ADMINISTERED BY VARIOUS ROUTES, AT DOSES TOXIC TO THE MATERNAL ANIMALS, HAS BEEN SHOWN TO PRODUCE DEVELOPMENTAL TOXICITY IN A NUMBER OF SPECIES. CARBARYL PRODUCES NO TERATOGENIC EFFECT IN THE ABSENCE OF MATERNAL TOXICITY. IN ADDITION, THE BALANCE OF THE EVIDENCE SUPPORTS THE CONCLUSION THAT THE ACTIVE INGREDIENT AND ITS POSSIBLE METABOLITES DO NOT REPRESENT A QUANTIFIABLE MUTAGENIC RISK TO HUMANS. CARCINOGENICITY STUDIES IN ANIMALS HAVE BEEN SHOWN TO BE NEGATIVE.

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:

MAY BE FATAL IF SWALLOWED. (SEE TOXICOLOGY DATA) MAY LEAD TO RAPID ONSET OF NAUSEA, VOMITING, ABDOMINAL PAIN, DIARRHEA, PINPOINT PUPILS, BLURRED VISION, PROFUSE SWEATING, SALIVATION, TREMOR, MUSCLE TWITCHING, AND TEMPORARY PARALYSIS. IN SEVERE POISONING RESPIRATORY DEPRESSION AND CONVULSIONS MAY OCCUR.

SKIN ABSORPTION:

HARMFUL IF ABSORBED THROUGH SKIN. (SEE TOXICOLOGY DATA) SYMPTOMS AS DESCRIBED ABOVE FOR SWALLOWING.

INHALATION:

HARMFUL IF INHALED. (SEE TOXICOLOGY DATA) INHALATION OF DUSTS OR SPRAYS (MISTS) MAY LEAD TO SYMPTOMS AS DESCRIBED ABOVE FOR SWALLOWING.

SKIN IRRITATION:

NO SIGNIFICANT ADVERSE EFFECTS ARE ANTICIPATED BASED ON AVAILABLE INFORMATION. (SEE TOXICOLOGY DATA)

EYE CONTACT:

CAUSES EYE IRRITATION, SEEN AS TEARING AND REDNESS. (SEE TOXICOLOGY DATA) DUSTS MAY BE IRRITATING TO THE EYES.

EFFECTS OF REPEATED OVEREXPOSURE:

THIS PRODUCT CAUSES REVERSIBLE CHOLINESTERASE INHIBITION. REPEATED OVEREXPOSURE MAY CAUSE MORE SEVERE CHOLINESTERASE INHIBITION WITH THE SIGNS AND SYMPTOMS DESCRIBED FOR SINGLE OVEREXPOSURE BEING MORE PRONOUNCED.

OTHER EFFECTS OF OVEREXPOSURE:

SEE NOTES TO PHYSICIAN.



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IV. HEALTH HAZARD DATA (CONTINUED)

EXISTING MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

SKIN IRRITATION MAY BE AGGRAVATED IN PERSONS WITH EXISTING SKIN LESIONS.

BREATHING OF VAPOR OR DUST MAY AGGRAVATE ACUTE OR CHRONIC ASTHMA AND CHRONIC PULMONARY DISEASE SUCH AS EMPHYSEMA OR BRONCHITIS.

OVEREXPOSURE MAY AGGRAVATE EXISTING CHRONIC CARDIOVASCULAR OR RESPIRATORY DISEASE, LEADING TO RESPIRATORY DIFFICULTY. PULMONARY

EDEMA AND CYANOSIS.

EMERGENCY AND FIRST AID PROCEDURES:

PRECAUTION: PERSONS ATTENDING THE VICTIM SHOULD AVOID DIRECT CONTACT WITH HEAVILY CONTAMINATED CLOTHING AND VOMITUS. WEAR IMPERVIOUS GLOVES WHILE DECONTAMINATING SKIN AND HAIR.

REMOVE THE PATIENT FROM IMMEDIATE SOURCE OF EXPOSURE AND ASSURE R
THAT THE INDIVIDUAL IS BREATHING. IF NOT BREATHING, USE CARDIOPULMONARY RESUSCITATION OR ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.

SWALLOWING:

R

IF PATIENT IS CONSCIOUS AND ALERT, GIVE 2-3 GLASSES OF WATER OR MILK TO DRINK. GIVE ONE TABLESPOON OF SYRUP OF IPECAC TO INDUCE VOMITING. IF VOMITING HAS NOT OCCURRED IN 20 MINUTES, THE SAME DOSE OF SYRUP OF IPECAC MAY BE REPEATED ONE ADDITIONAL TIME. ALTERNATIVELY, INDUCE VOMITING BY TOUCHING BACK OF THROAT WITH FINGER. DO NOT MAKE AN UNCONSCIOUS PERSON VOMIT. GET MEDICAL ATTENTION.

SKIN:

R

IMMEDIATELY WASH SKIN WITH PLENTY OF SOAP AND WATER, WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING SEPARATELY BEFORE REUSE.

INHALATION:

R

REMOVE VICTIM TO FRESH AIR. IF NOT BREATHING, ADMINISTER CARDIO-PULMONARY RESUSCITATION OR ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. GET MEDICAL ATTENTION.

EYES:

HOLD EYELIDS OPEN AND FLUSH WITH A STEADY, GENTLE STREAM OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

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IV. HEALTH HAZARD DATA (CONTINUED)

NOTES TO PHYSICIAN:

TREAT SYMPTOMATICALLY. CONSIDERATION SHOULD BE GIVEN TO THE POSSIBILITY THAT OVEREXPOSURE TO MATERIALS OTHER THAN THIS PRODUCT MAY HAVE OCCURRED.

THIS PRODUCT CONTAINS A METHYL CARBAMATE INSECTICIDE, WHICH IS A CHOLINESTERASE INHIBITOR. OVEREXPOSURE TO THIS SUBSTANCE MAY CAUSE TOXIC SIGNS AND SYMPTOMS DUE TO STIMULATION OF THE CHOLINERGIC NERVOUS SYSTEM. THESE EFFECTS OF OVEREXPOSURE ARE SPONTANEOUSLY AND RAPIDLY REVERSIBLE.

SPECIFIC TREATMENT CONSISTS OF PARENTERAL ATROPINE SULFATE. IMPROVE TISSUE OXYGENATION AS MUCH AS POSSIBLE BEFORE ADMINISTERING ATROPINE TO MINIMIZE THE RISK OF VENTRICULAR FIBRILLATION. MILD CASES MAY BE GIVEN 1 TO 2 MG INTRAMUSCULARLY EVERY 10 MINUTES UNTIL FULL ATROPINIZATION HAS BEEN ACHIEVED AND REPEATED THEREAFTER WHENEVER SYMPTOMS REAPPEAR. SEVERE CASES SHOULD BE GIVEN 2 TO 4 MG INTRAVENOUSLY EVERY 10 MINUTES UNTIL FULLY ATROPINIZED, THEN INTRAMUSCULARLY EVERY 30 TO 60 MINUTES AS NEEDED TO MAINTAIN THE EFFECT FOR AT LEAST 12 HOURS. DOSAGES FOR CHILDREN SHOULD BE APPROPRIATELY REDUCED. CAUTION SHOULD BE MAINTAINED TO PREVENT OVERATROPINIZATION. COMPLETE RECOVERY FROM OVEREXPOSURE IS TO BE EXPECTED WITHIN 24 HOURS.

NARCOTICS AND OTHER SEDATIVES SHOULD NOT BE USED. FURTHER, DRUGS LIKE 2-PAM (PYRIDINE-2-ALDOXIME METHIODIDE) ARE NOT RECOMMENDED.

TO AID IN CONFIRMATION OF A DIAGNOSIS, URINE SAMPLES SHOULD BE OBTAINED WITHIN 24 HOURS OF EXPOSURE AND IMMEDIATELY FROZEN. CALL RHONE-POULENC 1-800-334-7577 BEFORE SENDING SAMPLES. ANALYSES WILL BE ARRANGED BY RHONE-POULENC AG COMPANY.

PERSONS REGULARLY EXPOSED IN MANUFACTURING AND HANDLING THIS PRODUCT SHOULD HAVE A PREEXPOSURE AND PERIODIC RED BLOOD CELL CHOLINESTERASE LEVEL CHECKS.

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V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT DEGREES C (F): 193 (380) CLEVELAND OPEN CUP

EXPLOSIVE LIMITS IN AIR (OUNCES/CUBIC FOOT):

LOWER: 0.02

UPPER: NOT KNOWN

AUTOIGNITION TEMPERATURE DEGREES C (F): 625 (1157)

EXTINGUISHING MEDIA: USE CARBON DIOXIDE OR DRY CHEMICAL FOR SMALL FIRES. USE WATER SPRAY OR FOAM (ALCOHOL, POLYMER, OR ORDINARY) FOR LARGE FIRES.

SPECIAL FIRE FIGHTING PROCEDURES: PROVIDE FOR THE PROTECTION OF EMPLOYEES AND RESIDENTS:

- A) EVACUATE RESIDENTS WHO ARE DOWNWIND OF FIRE.
- B) PREVENT UNAUTHORIZED ENTRY TO FIRE AREA.
- C) PERSONS WHO MAY HAVE BEEN EXPOSED TO CONTAMINATED SMOKE SHOULD BE EXAMINED BY A PHYSICIAN AND TREATED APPROPRIATELY.
- D) DIKE AREA TO PREVENT RUNOFF AND CONTAMINATION OF WATER SOURCES.

NOTIFY LOCAL AUTHORITIES THAT FIREMEN SHOULD:

- A) WEAR PROTECTIVE CLOTHING AND USE SELF-CONTAINED BREATHING APPARATUS.
- B) BE IMMEDIATELY RELIEVED FROM DUTY, IF EXPOSED TO CONTAMINATED SMOKE, AND CHECKED FOR SYMPTOMS OF POISONING. THESE SHOULD NOT BE MISTAKEN FOR HEAT EXHAUSTION OR SMOKE INHALATION. SEE SECTION IV, HEALTH HAZARD DATA FOR SYMPTOMS OF POISONING, FIRST AID PROCEDURES, AND NOTES TO PHYSICIAN.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

THERMAL DECOMPOSITION PRODUCTS MAY BE HAZARDOUS. THESE MAY INCLUDE NITROGEN OXIDES, CARBON MONOXIDE, CARBON DIOXIDE, AND OF METHYL IOSCYANATE.

AVOID DISPERSION OF DUST IN AIR TO REDUCE POTENTIAL EXPLOSION HAZARD. USE ELECTRICAL EQUIPMENT SUITABLE FOR ATMOSPHERES THAT MAY CONTAIN COMBUSTIBLE DUSTS.

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SAFETY DATA

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RHONE-POULENC AG COMPANY

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VI. REACTIVITY DATA

STABILITY: '

CONDITIONS TO AVOID:

EXTENDED STORAGE AT TEMPERATURES IN EXCESS OF 100 DEGREES F (37.8 C). KEEP AWAY FROM HEAT, SPARKS, OPEN FLAME AND OTHER IGNITION SOURCES.

MATERIALS TO AVOID:
ALKALIS, STRONG ACIDS

HAZARDOUS DECOMPOSITION PRODUCTS:

NITROGEN OXIDES, CARBON MONOXIDE, CARBON DIOXIDE, AND METHYL ISOCYANATE MAY BE PRODUCED UPON THERMAL DECOMPOSITION.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
TO THE EXTENT POSSSIBLE, CLEAN UP SPILLAGE USING SHOVELS. CAREFULLY
SCOOP UP LOOSE MATERIAL AND PLACE IT IN APPROPRIATE CONTAINERS SO
AS TO AVOID DUST GENERATION. STAND UPWIND IF POSSIBLE.

RESIDUAL SPILLAGE THAT CANNOT BE REMOVED BY SHOVELLING SHOULD BE CLEANED FROM HARD SURFACES AS APPROPRIATE.

IF SPILLED ON THE GROUND, THE AFFECTED AREA SHOULD BE SCRAPED CLEAN AND PLACED IN AN APPROPRIATE CONTAINER FOR DISPOSAL.

DO NOT FLUSH MATERIAL TO PUBLIC SEWER SYSTEMS OR ANY WATERWAYS. WEAR APPROPRIATE PROTECTIVE CLOTHING AND EQUIPMENT (SEE BELOW) DURING CLEANUP ACTIVITIES.

ENSURE ADEQUATE DECONTAMINATION OF TOOLS AND EQUIPMENT FOLLOWING CLEANUP.

WASTE DISPOSAL METHOD:

R

R

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

NOTE: SPILLS ARE SUBJECT TO CERCLA REPORTING REQUIREMENTS:

RO = 100 LBS CARBARYL

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VIII. SPECIAL PROTECTION INFORMATION

PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:

- MANUFACTURE OR FORMULATION OF THIS PRODUCT
- REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT
- CLEAN-UP OF LEAKS AND SPILLS

RESPIRATORY PROTECTION: USE NIOSH/MSHA APPROVED RESPIRATOR FOR PESTICIDE DUST WHEN HANDLING SPILLS OR LEAKS, OR WHEN AIRBORNE CONCENTRATIONS EXCEED ALLOWABLE EXPOSURE LIMITS.

VENTILATION: MECHANICAL (GENERAL) VENTILATION.

PROTECTIVE GLOVES: CHEMICAL-RESISTANT GLOVES, E.G. PVC OR BUTYL.

EYE PROTECTION: GOGGLES, EYE BATH.

OTHER PROTECTIVE EQUIPMENT: FULL-BODY PROTECTIVE CLOTHING, SAFETY SHOWER.

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IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

DO NOT INGEST. AVOID EXPOSURE BY INHALATION. AVOID GETTING IN EYES, ON SKIN OR ON CLOTHING.

STORE UNUSED PRODUCT IN ORIGINAL CONTAINER ONLY, IN COOL DRY AREA OUT OF REACH OF CHILDREN AND ANIMALS.

DO NOT STORE IN AREAS WHERE TEMPERATURES FREQUENTLY EXCEED 100 DEGREES F. DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL.

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X. REGULATORY STATUS

TSCA INVENTORY STATUS:

TSCA CERTIFIED

EPA REGISTRATION NO.:

264-324

RCRA HAZARDOUS WASTE:

NOT LISTED

SARA TITLE III

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE LIST: NOT LISTED

SECTION 313 TOXIC CHEMICALS:

YES, CARBARYL

REPORTABLE QUANTITY (RQ), UNDER U.S. EPA CERCLA:

100 LBS CARBARYL

CALIFORNIA PROPOSITION 65:

NOT LISTED

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH BUT NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE.

SEVIN IS A REGISTERED TRADEMARK OF RHONE-POULENC FOR CARBARYL INSECTICIDE.

A IN MARGIN INDICATES ADDITIONAL INFORMATION SINCE LAST REVISION. R IN MARGIN INDICATES A REVISION.

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